

New York State Department of Transportation

Yellow Flag NB23U4W012

By: Malav Shah

Flag Date: April 27, 2023

Superseding Information:

This flag supersedes: YF NB2222W009

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: April 27, 2023 3:00:00 PM

Of: NYSDOT Region 11

Signature Information

Signature: Malav Shah, P.E. 106620-1

Date: May 24, 2023

Reviewed By: Robert Kemp

Date: May 24, 2023

Attachments: 7

Flagged Elements

| Parent Element | Element | Total Quantity | Unit |
|--------------------------|------------------------------|----------------|------|
| Span Number : 254 | | | |
| | 107 - Steel Open Girder/Beam | 989 | ft |

Flagged Condition Description

This Yellow Flag No. NB23U4W012 is superseding Yellow Flag No. NB2222W009.

Location: Span 254, Girder G1 at Pier 254

Description: Girder G1 web along the connection angle exhibits 49% overall section loss for the full height of the web (previously noted to be 51%).

Additionally, the left connection angle exhibits up to 50% section loss along the fillet (no change from previous) and 100% edge section loss at the upper right corner for 3"L x 3"H triangle area (no change). The right connection angle of Girder G1, along the web of the girder, (from the bottom cope of the web of Girder G1 to the top cope of the web of Girder G1), is in good condition with minor corrosion (less than 10% section loss) and pack rust at the top. The right connection angle below the bottom cope of the Girder G1 web exhibits up to 90% section loss with two corrosion holes measuring 4"H x 2"W and 6.5"H x 3.5"W (no change). The lower web of the girder, above the bottom flange near the connection to the pier exhibits 38% section loss (previously noted to be 35% section loss) along bottom flange over an area of 12"L x 2"H.

Notes:

- 1.The affected member, Girder G1 is a load path redundant steel girder consisting of a web depth of 19.5" inches and thickness of 0.635 inches and is located under the deck in the roadway, approximately 12" off the edge of curbline/safety walk. All dimensions were measured in the field.
- 2.The adjacent Girder G2, is 5'-5" on center, and is in good condition.
- 3.The adjacent Stringer S1, approximately 24" on center, acts as a support for the railing and curb area above. Stringer end at Pier 254 has 1" diameter hole in right angle of the bottom flange and up to 30% overall section loss for 1'L. The stringer web exhibits up to 15% section loss along the connection angle. .
- 4.A right single lane closure on 3rd Avenue Eastbound between 20th and 21st streets with a 60' bucket truck was used to access platforms installed by contractor for on-going construction/painting work, to inspect this location.

Flag Photographs

Photo Number: 1

Photo Filename: NB23U4W012 LOCATION PLAN.JPG

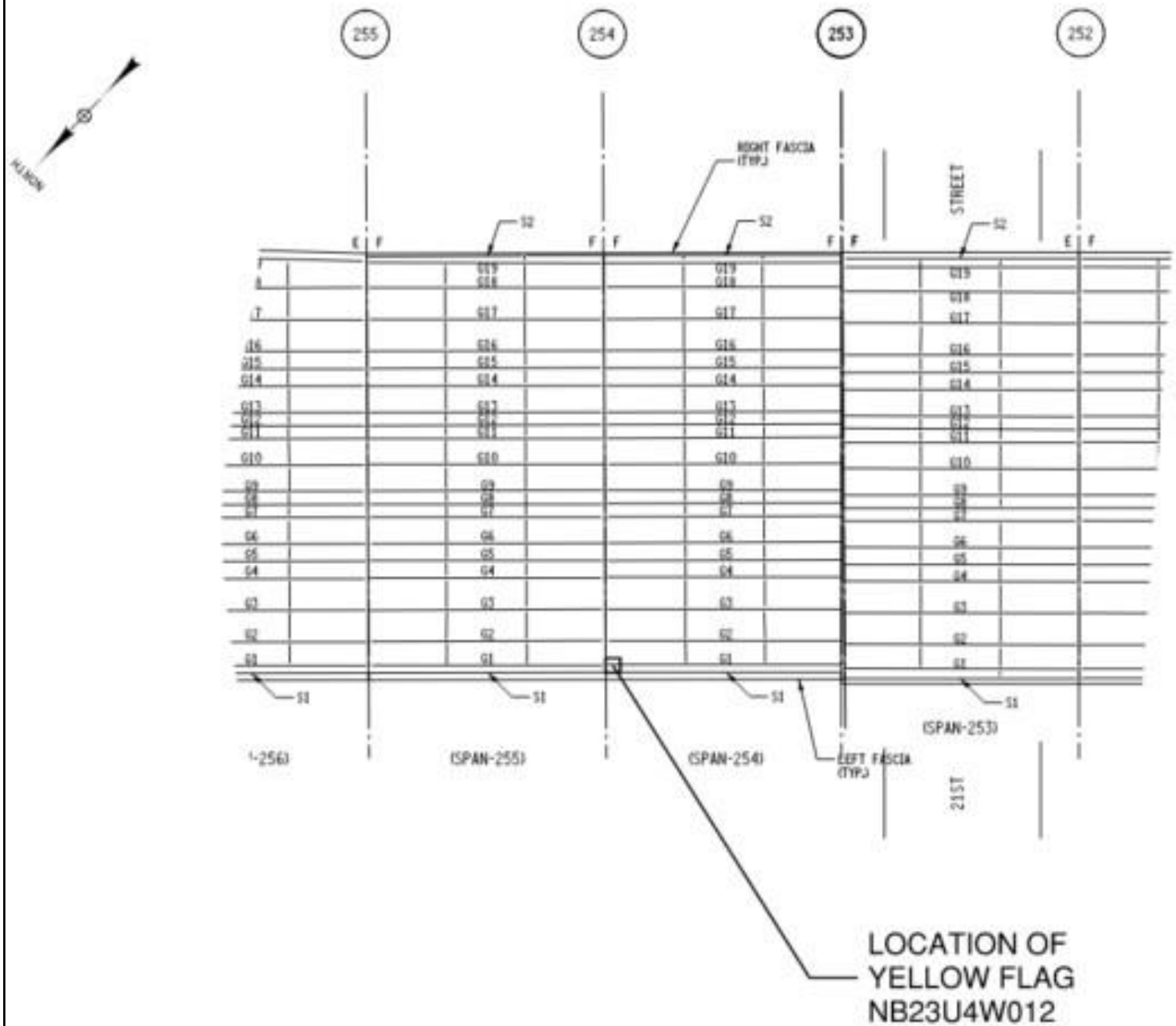
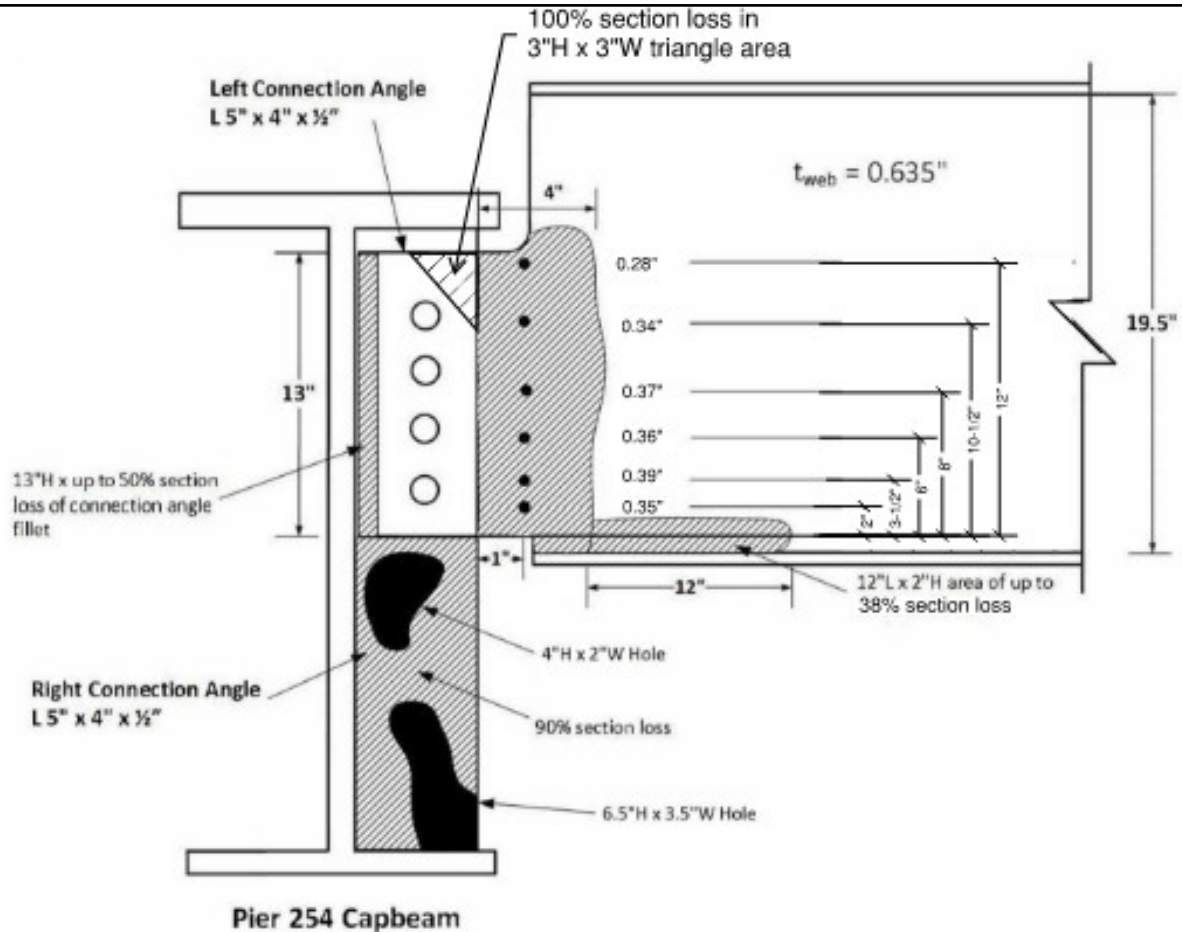
**Attachment Description: Flag Location Plan**

Photo Number: 2

Photo Filename: NB23U4W012 Condition Sketch.JPG

**Section Loss Calculations:**

Original Girder Web Thickness = 0.635" (as measured in the field)

As Built shearing web area = 13" H x 0.635" T = 8.255 sq. in.

Average remaining web section = $[0.28 \times 1.5] + [0.34 \times 2.5] + [0.37 \times 2] + [0.36 \times 2.5] + [0.39 \times 1.5] + [0.35 \times 2]$
 = 4.195 sq. in.

Web section loss – $((8.255 - 4.195)/8.255) \times 100\% = 49.18\%$ SAY = 49%

SKETCH FOR YELLOW # NB23U4W012
SPAN 254, GIRDER G1 AT PIER 254
(LOOKING RIGHT)
N.T.S

Attachment Description: Flag Condition Sketch

Photo Number: 3

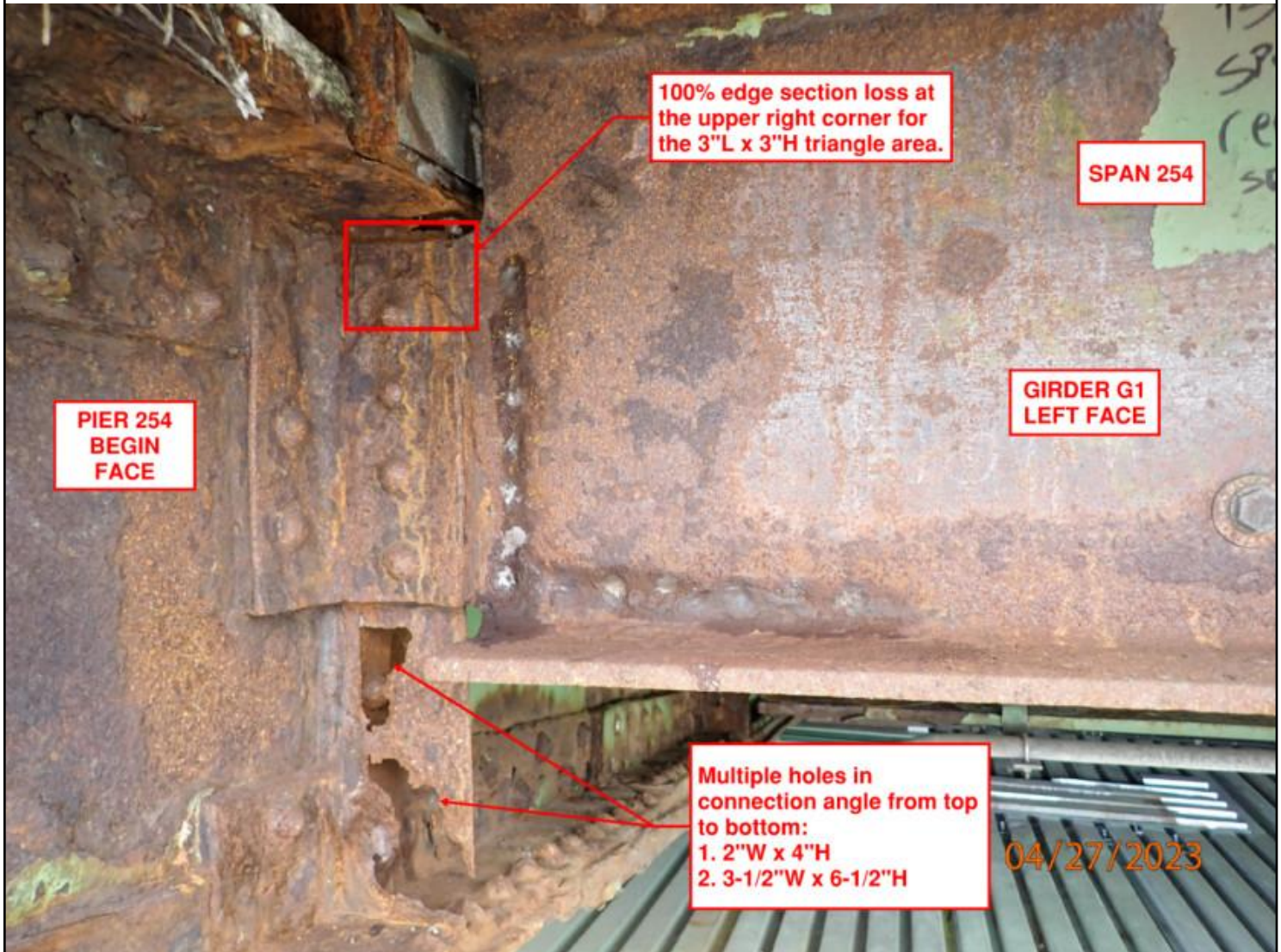
Photo Filename: P5042887.JPG



Attachment Description: Span 254, Girder G1 at Pier 254. General view of the flagged location at Pier Cap connection, above platforms. Looking End-Up.

Photo Number: 4

Photo Filename: P4272685.JPG



Attachment Description: Span 254, Girder G1 at Pier 254. Close-up view of Girder G1 showing heavy section loss to the web of the Girder and corrosion holes in connection angle. Looking End-Right.

Photo Number: 5

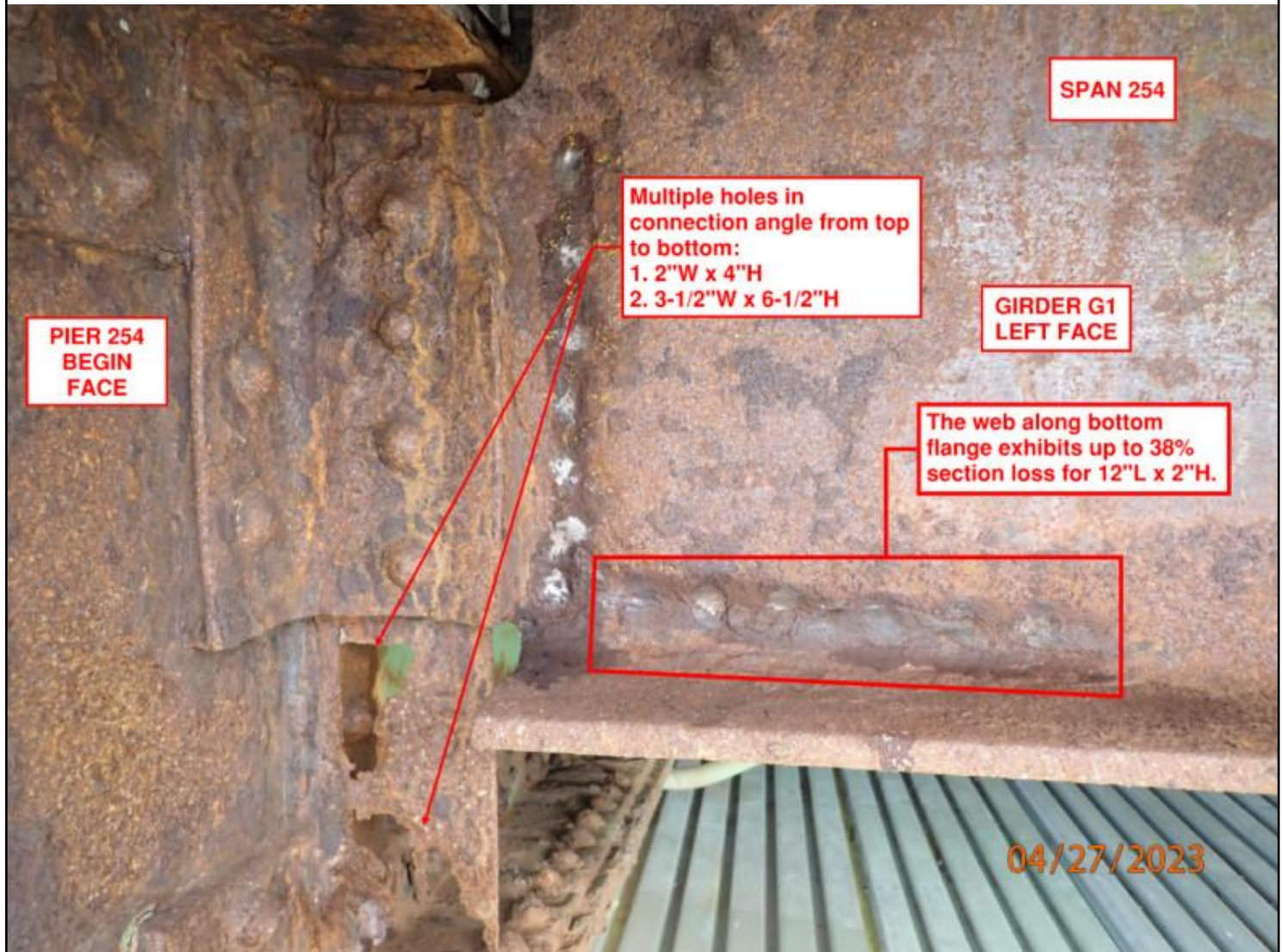
Photo Filename: P4272686.JPG



Attachment Description: Close-up view of 100% edge section loss at the upper right corner for 3"L x 3"H triangle area. Looking End-Right.

Photo Number: 6

Photo Filename: P4272688.JPG



Attachment Description: Close-up view of the right connection angle that exhibits two corrosion holes measuring 4"L x 2"H and 3.5"W x 6.5"H. In addition, the web along bottom flange exhibits up to 38% section loss for 12"L x 2"H area. Looking Right.

Photo Number: 7

Photo Filename: P4272691.JPG



Attachment Description: General view of Girder G1 right side web and connection angle. The web exhibits full height section loss. Looking End-Left.